

CLAIMS

What is claimed is:

1. A method for adaptive text recommendation, the method comprising:
  - 5 receiving a query; and
  - adaptively changing the query result in response to the query.
2. The adaptive text recommendation method of Claim 1 wherein the changing step comprises clustering of an interest set of documents into one or more clusters;
  - 10 extracting keywords for the one or more clusters that represent the theme of the documents in the one or more clusters; filtering of an eligible set of documents to meet application criteria; and adaptively constructing a recommended set of documents for each cluster of the one or more clusters.
- 15 3. The adaptive text recommendation method of Claim 2 wherein the clustering step further comprises assembling the interest set of documents; pre-processing words of the interest set of documents; and grouping of documents from the interest set of documents into the clusters utilizing a clustering algorithm that maximizes the cluster score of the clusters.
- 20 4. The adaptive text recommendation method of Claim 3 wherein the assembling step comprises collecting documents previously viewed by a client; collecting e-mails

that elicited a response from the client; collecting documents describing items previously bought by the client; collecting documents describing items the client made a bid on; collecting documents associated with selections from a list of documents, the selections being made by the client; collecting pages of web sites wherein the client indicated 5 interest; collecting documents recorded for the client; and collecting documents associated with a client transmitted from a remote source.

5. The adaptive text recommendation method of Claim 3 wherein the pre-processing step comprises removing common words in the language used in the 10 application; and removing words which are not significant for the application.

6. The adaptive text recommendation method of Claim 2 wherein the extracting keywords step utilizes a process that calculates the keyword score of the cluster and select keywords that maximizes the keyword score of the cluster.

15

7. The adaptive text recommendation method of Claim 2 wherein the eligible set of documents comprises documents from an application web site; documents from other web sites; documents from private databases; and documents selected from the Internet using a search process.

20

8. The adaptive text recommendation method of Claim 2 wherein the construction of the recommended set of documents further comprises calculating a

relevance score of each document in the eligible set of documents; selecting documents of the eligible set of documents with high relevance scores; and applying other selection criteria comprising popularity of the document in the eligible set of documents and client preference for the document in the eligible set of documents.

5

9. The adaptive text recommendation method of Claim 2 further comprising presenting the recommended set of documents using a presentation technique that comprises sending an e-mail, displaying a greeting, displaying an HTML fragment, sending a fax, sending a voicemail, sending a video alert, sending an audio alert, and  
10 transmitting a file representing the recommended set of documents.

10. The adaptive text recommendation method of Claim 1 wherein the received query comprises a request from a requestor device enabled by an action of the client and a software request.

15

11. The adaptive text recommendation method of Claim 10 wherein the action of the client enabling the query request comprises logging onto a web site that automatically generates the query; manually requesting the query; and making a selection at the web site that generates the query.

20

12. A method of adaptive offer recommendation, the method comprising:  
receiving a query for an offer; and

adaptively changing the recommended set of offers in response to the query.

13. The adaptive offer recommendation method of Claim 12 wherein the changing step comprises clustering of an interest set of offer descriptions into clusters; 5 extracting keywords for the clusters, the keywords representing the theme of the offer descriptions of the clusters; and filtering of an eligible set of offer descriptions to meet an application criteria; and adaptively constructing a recommended set of offer descriptions for the clusters.
- 10 14. The adaptive offer recommendation method of Claim 13 wherein the eligible set of offer descriptions comprises offer descriptions of auction items, items for sale, items for swap, job openings, items to buy, and services for sale.
- 15 15. The adaptive offer recommendation method of Claim 13 wherein the construction of the recommended set of offer descriptions further comprises calculating a relevance score of each offer description in the eligible set of offer descriptions; selecting a plurality of offer descriptions of the eligible set of offer descriptions with high relevance scores; and applying other selection criteria comprising popularity of the offer description in the eligible set of offer descriptions and client preference for the offer description in 20 the eligible set of offer descriptions.

16. An adaptive text recommendation system comprising:

SEARCHED SERIALIZED INDEXED  
100-1000000000

a query receiving processor for receiving a query;  
a database for storing a plurality of document records including Internet document records, private document records, and other public network document records;  
a query response processor for sending a response to the query; and  
5 an adaptive text processor, coupled to the query receiving processor, the database, and the query response processor, for receiving the query from the query receiving processor, analyzing the text of an interest set of document records from the database, grouping the interest set of document records into clusters; extracting keywords from the text of the document records grouped into the clusters, filtering the eligible set of 10 document records from the database to meet an application criteria; and adaptively constructing the recommended set of document records for the clusters, and passing the recommended set of document records to the query response processor.

17. The adaptive text recommendation system of Claim 16 wherein the eligible 15 set of document records comprises document records from the application web site; document records from other web sites; document records from private databases; and document records selected from the Internet using a search process.

18. The adaptive text recommendation system of Claim 16 further comprising a 20 database update processor for updating the interest set of documents with new documents.

19. The adaptive text recommendation system of Claim 16 wherein the adaptive text processor is operable in a distributed manner at a remote location.

20. A computer storage medium storing the computer readable code for causing a computer system to execute the steps of an adaptive text recommendation system, the steps comprising:

clustering of an interest set of documents into clusters;  
extracting keywords for the clusters, the keywords representing the theme or concept of the documents of the clusters;  
filtering of an eligible set of documents to meet application criteria;  
adaptively constructing the recommended set of documents for the clusters; and presenting the recommended set of documents.

21. An adaptive data recommendation system comprising:  
a query receiving processor for receiving and processing a query;  
a database for storing a plurality of data description records including Internet data description records, private data description records, and other public network data description records;  
a query response processor for sending a response to the query; and  
20 an adaptive data processor, coupled to the query receiving processor, the database; and query response processor, for receiving the query from the query receiving processor, analyzing the text of an interest set of data description records from the database,

grouping the interest set of data description records into clusters; extracting keywords from the text of the data description records grouped into the clusters, filtering the eligible set of data description records from the database to meet an application criteria; and adaptively constructing the recommended set of data description records for the

5       clusters, and passing the recommended set of data description records to the query response processor.

22. An adaptive text recommendation apparatus comprising:

a computer comprising input means for entering a query and display means for

10      presenting a recommended set of documents; and

            communications means for wirelessly coupling the computer to an information network, the information network containing at least an interest set of documents and an eligible set of documents;

            wherein the query entered through the input means of the computer enables the

15      computer to wirelessly connect to the information network and to execute the steps of an adaptive text recommendation system, the steps comprising clustering of the interest set of documents into clusters; extracting keywords for the clusters, the keywords representing the theme or concept of the documents of the clusters; filtering of the

            eligible set of documents to meet an application criteria; constructing a recommended set

20      of documents; and presenting the recommended set of documents using the display means of the computer.

23. A method for adaptively classifying documents, the method comprising:  
clustering of an interest set of documents into clusters;  
extracting keywords for the clusters that represent the theme of the documents of  
the clusters;  
5 filtering of an eligible set of documents to meet application criteria;  
constructing a recommended set of documents; and  
presenting the recommended set of documents using a presentation technique that  
comprises sending an e-mail, displaying personal e-mail, displaying a greeting, displaying  
an HTML fragment, sending a fax, sending a voicemail, sending a video alert, sending an  
10 audio alert, and transmitting a file representing the recommended set of documents.

24. An adaptive document search system comprising:  
a query receiving processor for receiving a search query;  
a database for storing an interest set of document records comprising Internet  
15 document records, private document records, and other public network document records;  
a search engine, for searching the database for documents matching a search  
criteria;  
a search query response processor for sending a response to the search query; and  
an adaptive text processor, coupled to the query receiving processor, the database,  
20 the search engine, and the query response processor;  
wherein the adaptive text processor, upon receiving the search query from the  
query receiving processor, analyzes the text of the interest set of document records from

the database, groups the interest set of document records into clusters; extracts keywords from the text of the document records grouped into the clusters, and communicates the extracted keywords to the search engine; and

wherein the search engine searches the database for documents matching the

- 5    search criteria comprising the communicated keywords from the adaptive text processor.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100